

IN THE WRITTEN DESCRIPTION:

Please amend paragraph 32 of the application as follows:

[01]

Device 100 is preferably in telemetric communication with an external device 50 which couples to a programming head 52 for providing operable telemetry between the device 50 and the implanted device 100. External device 50 may be embodied as a “programmer,” as well known in the art of cardiac pacemaker technology, for use in transmitting programming commands to and receiving data from the implanted device 100.

Please amend paragraph 37 of the application as follows:

[02]

The digital controller/timer circuit 132 includes a set of timers and associated logic circuits connected with the microcomputer circuit 114 through the data communications bus 130. Microcomputer circuit 114 contains an on-board chip 116 including microprocessor 120, associated system clock 122, and on-board RAM and ROM chips 124 and 126, respectively. In addition, microcomputer circuit 114 includes an off-board circuit 118 including separate RAM/ROM chip 128 to provide additional memory capacity. Microprocessor 120 is interrupt driven, operating in a reduced power consumption mode normally, and awakened in response to defined interrupt events, which includes the periodic timing out of data sampling intervals for storage of monitored data, the transfer of triggering and data signals on the bus 130 and the receipt of programming signals. A real time clock and calendar function may also be included to correlate stored data to time and date.

Please amend paragraph 52 of the application as follows:

[03]

Once a storage interval expires, as determined at decision step 425, at step 430 one or more statistical parameters are computed from the stored physiological parameter data. Computed statistical parameters may include, but are not limited to, an average, standard deviation, median, maximum, minimum and/or percentile. A computed statistical aspect from step 430 is then written to a long-term memory buffer at step 435.

Please amend paragraph 58 of the application as follows:

[04]

The output 208 of data processing block 206 is further provided via conductor 212 as an input to a second memory buffer 214 designated as a medium-resolution temporary memory buffer. Medium-resolution temporary memory buffer 214 receives and stores a number, C , (via conductor 212) of statistical values from processing block 206. The number of values, C , stored by medium-term temporary memory buffer 214 is determined according to a selectable, preferably programmable, medium-term storage interval and the resolution of the finely-resolved statistical feature determined by block 206. For example, if the fine-resolution storage interval is set to one minute, a medium-resolution storage interval may be set to one hour. As such, medium-resolution temporary memory buffer 214 will receive 60 statistical values from output 208 of processing block 206.

Please amend paragraph 60 of the application as follows:

[05]

The output 218 of medium-resolution processing block 216 is further provided via conductor 222 as input to a coarse-resolution temporary memory buffer 224. A number, F , of medium-resolution data values may be stored in coarse-resolution temporary memory buffer 224. The number of values stored in coarse-resolution temporary memory buffer 224 will depend on a selectable coarse-resolution storage interval and the resolution of the medium-resolution values received as input. Continuing the example provided above wherein a medium-resolution storage interval was set as one hour, a coarse-resolution storage interval may be set to 24 hours such that upon expiration of a 24-hour storage interval a daily statistical value may be determined by processing block 226.

Please amend paragraph 73 of the application as follows:

[06]

The heart rate (or R-R interval) and each of the pressure-related parameters of interest may be determined on a beat-by-beat basis as described previously. A bank of temporary histograms 306 and associated long-term

looping memory buffers 308 are provided for storing parameterized data and statistical aspects of parameterized data, respectively. In the embodiment of Figure 6, a fine-resolution temporary histogram 314 having a short storage interval and a coarse-resolution temporary histogram 316 having a relatively long storage interval are provided for receiving and temporarily storing derived physiological parameter values received from signal processing blocks 302 or 304. For example, a fine-resolution temporary histogram 310 having a short storage interval and a coarse resolution temporary histogram 312 having a relatively long storage interval are provided for receiving and storing heart rate data from signal processing block 302. Physiological parameters will be stored in respective temporary histograms 314,316 for the designated storage interval, defined according to the temporal resolution desired as described previously. Multiple temporary histograms may be provided for a given physiological parameter with each temporary histogram having a uniquely defined storage interval for achieving relatively fine and coarse temporal resolutions 314,316 as shown in Figure 6, and may further include any number of intermediate resolution temporary histograms (not shown in Figure 6).